In the present work a comparative study of the developmental biology of the free living nematodes e.g., *Teratorhabditis andrassyi* Tahseen and Jairajpuri, 1988, *Cephalobus parvus* Thorne, 1937, *Diploscapter orientalis* Kannan, 1968; *Plectus acuminatus* Bastian, 1865 and *Tobrilus paludicola* Micoletzky, 1925 and the predatory nematode *Mononchoides fortidens* (Schuurman's Stekhoven, 1951) Taylor and Hechler, 1968 was carried out.

Of the six species two were monodelphic viz *Ter. andrassyi* and *C. parvus* and the other didelphic. Three species *Ter. andrassyi, M. fortidens* and *Tob. paludicola* reproduced by amphimixis while the other three by parthenogenesis. The males of *Ter. andrassyi* and *M. fortidens* are monorchic and *Tob. paludicola* diorchic.

The gravid females of *P. acuminatus* possessed largest number of eggs. i.e. upto 12 as compared to other species which possessed lesser number of eggs. In old females due to continuous egg laying, the weakening of muscles caused vaginal prolapse in *P. acuminatus*.

The eggs of *C. parvus, Ter. andrassyi, D. orientalis* and *M. fortidens* were similar in shape i.e. elongate while that of *Tob. paludicola* and *P. acuminatus* were ellipsoidal to rounded. The eggs of *D. orientalis* and *P. acuminatus* possessed small blunt spines on the shell.
while the eggs of other four species were smooth shelled.

Cleavage upto four celled stage in *Ter. andrassyi*, *M. fortidens*, *P. acuminatus* and *Tob. paludicola* was similar. The division patterns of *C. parvus* and *D. orientalis* showed much resemblance and were similar to those of tylenchids and *Xiphinema* and *Longidorus* among dorylaims. Blastoporal lips were prominent in *Tob. paludicola* and *P. acuminatus* and only faintly visible in others.

The movement of embryo within the egg started at an early stage in *Ter. andrassyi* and very late in *Tob. paludicola*. The juveniles of the species with spherical or ellipsoidal eggs viz *P. acuminatus* and *Tob. paludicola* formed small coils with spaces in between while the juveniles of elongate eggs viz *Ter. andrassyi*, *C. parvus*, *D. orientalis* and *M. fortidens* made larger coils with flexures at the poles and covered the total volume of the egg.

The duration of embryonic development was maximum for *Tob. paludicola* and minimum for *Ter. andrassyi*.

In freshly hatched juveniles all the somatic parts of the body were fully formed with the exception of *D. orientalis* juveniles which lacked labial hooks.
The post-embryonic development of the didelphic species, *D. orientalis* and *M. fortidens* showed similarity but differed from *Tob. paludicola*. Similarly, although *Ter. andrassyi* and *C. parvus* were both monodelphic, they differed in primordial developmental patterns. The gonad of all selected species developed from a single genital primordium with exception of *P. acuminatus* where the gonad developed from two primordia placed slightly apart.

In *Ter. andrassyi* and *M. fortidens* differentiation between sexes became evident during second moulting while it was marked during third stage in *Tob. paludicola*. The third stage male juveniles of *Ter. andrassyi* and *M. fortidens* showed an aggregation of somatic nuclei in the anterior part while in third stage male juveniles of *Tob. paludicola* the arrangement of somatic nuclei was in both directions.

In third stage female juveniles of the didelphic species, anterior and posterior elongation of primordium occurred. It was posteriad in the monodelphic *Ter. andrassyi* but anteriad and posteriad in *C. parvus* which was also monodelphic. The third stage female juvenile of *P. acuminatus* possessed two primordia which no longer remained separate because of increase in length and width.
The ventral chord nuclei formed a single row in all the species with the exception of *Tob. paludicola* which showed double row with nuclei arranged in zig-zag pattern. A split in ventral chord nuclei of third stage female juvenile developed indicating the future site of vulva and initiation of vagina formation. The position of these nuclei was almost equatoral or nearly so in all species except *Ter. andrassyi* where it occurred in the region of intestine and rectum junction. In addition to split in ventral chord nuclei the specialized ventral chord nuclei were characteristics of the third stage female juveniles. *M. fortidens, P. acuminatus* and *Tob. paludicola* third stage juveniles possessed an elongate nucleus in addition to specialized ventral chord nuclei.

Fourth stage male primordium of *Ter. andrassyi* and *M. fortidens* represented a flexure which contained germ cells with a posterior gonoduct having somatic nuclei in it. Fourth stage male juveniles of *Tob. paludicola* exhibited a primordium which elongated anteriorly as well as posteriorly with a tube coming out from the middle of primordium running posteriorly. An aggregation of nuclei was also observed in ventral chord region, being more prominent in the posterior half of body. These cells referred to as ‘special’ chord nuclei, were the characteristic feature of male juveniles. These nuclei gave rise to ventro-median supplements by aggregating in
a semi circular area with the invaginated cuticle in between. The formation of supplements along with spicules was completed in the final stages which also brought about the union of ejaculatory duct with rectum to form cloaca.

The fourth stage female primordium of *Ter. andrassyi* possessed a broader anterior part with posterior gonoduct. The anterior part contained germinal nuclei while the latter had somatic nuclei in it. The primordium development of didelphic species *M. fortidens*, *P. acuminatus* and *D. orientalis* followed similar trends, with formation of anterior and posterior arms and an obliquely placed central body. The germinal nuclei were aggregated at the tip of the arms. The primordium of didelphic *Tob. paludicola* however was slightly different in shape to that of other didelphic species and did not show oblique orientation. *C. parvus* female juveniles show a reflexed primordium with germinal part and a gonoduct that expanded at the future site of vagina.

The specialized ventral chord nuclei in all the cases become closely arranged and helped in the formation of vagina. The flexure in the gonad in the anterior region was observed. Single flexure in gonad was observed in all the nematodes except *C. parvus* which may show additional flexures.